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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/023,641	12/21/2001	Timothy Harris Kuhl	123081-339665 TO1215-0083	6343

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EXAMINER	
SCHEIBEL, ROBERT C	

ART UNIT	PAPER NUMBER
2666	

DATE MAILED: 12/08/2005

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/023,641	KUHL ET AL.	
	Examiner	Art Unit	
	Robert C. Scheibel	2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 December 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *21 December 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *3/11/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. Figures 1, 2, 3A, and 3B should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheets should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims **3-6** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim **3** recites the limitation "said each or said plurality of traffic flows" in line 4. There is insufficient antecedent basis for this limitation in the claim. This rejection can be overcome by removing the first "said" in this phrase.

Claims 4-6 are rejected as they depend from indefinite claim 3.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims **1-11** are rejected under 35 U.S.C. 102(b) as being anticipated by EP 1 009 132 A2 to Endo et al.

Regarding claim **1**, Endo discloses a method of reassembling packets from a plurality of traffic flows in a network element (lines 23-26 of column 3 for example), each of said packets having at least one data part, said method comprising the steps of: (1) queuing each of said at least one data part of said packets of said plurality of traffic flows in a single reassembly queue in a sorted order (see queue 40-1 of figure 1 and lines 23-26 of column 3 and lines 46-49 of column 7), said at least one data part of said each of said packets being continuously grouped without data parts of other of said packets being interleaved therein (see lines 19-21 of column 3, and lines 40-46 of column 7); and (2) reassembling said at least one data part of said each of said packets queued in said single reassembly queue (lines 23-26 of column 3).

Regarding claim **7**, Endo discloses a network element providing datapath connectivity for a plurality of traffic flows, said network element transmitting cells within said network element (lines 23-28 of column 6), said plurality of traffic flows transmitting variable-length packets to said network element (lines 40-42 of column 5), said network element comprising: an ingress card (input interface 3-x of figure 1 for example) having segmentation module adapted to

segment said variable-length packets of said plurality of traffic flows into at least one cell (see figure 1 – packets 65-x-y are segmented into cells 67; see also lines 23-26 of column 6 and lines 29-31 of column 7), said ingress card transmitting said cells formed from each of said variable-length packets in a packet ordered stream grouped together in a sorted order (see lines 40-46 of column 7); and an egress card (output interface 4-x of figure 1 for example) receiving said cells transmitted in said packet ordered stream, said egress card having: an egress queuing module adapted to queue said cells of said variable-length packets of said plurality of traffic flows into a single reassembly queue (lines 23-26 of column 3); and a reassembly module adapted to reassemble said cells queued in said single reassembly queue into variable-length packets (see lines 46-49 of column 7).

Regarding claim **11**, Endo discloses a method of providing traffic guarantees for a plurality of traffic flows in a network element, each traffic flow of said plurality of traffic flows having a weight (see figure 2; the weight is the priority; see also lines 35-40 of column 9), said network element having an ingress card (input interface 3-x of figure 1 for example) and an egress card (output interface 4-x of figure 1 for example), said method comprising: receiving said plurality of traffic flows at said ingress card in said network element (see figure 1 and lines 23-28 of column 6 for example); and transmitting said plurality of traffic flows to said egress card in said network element over a packet stream (the path established through the switch 62 of figure 1; see lines 36-40 of column 7), a traffic flow of said plurality of traffic flows receiving bandwidth on said packet stream based on said weight of said traffic flow (lines 35-50 of column 9).

Regarding claim **2**, Endo discloses the limitations as follows. The limitation of (0.1) an initial step of transmitting said at least one data part of said packets to an egress card of said network element in a packet ordered stream, said at least one data part of said each of said packets being continuously grouped without interleaved data parts of other of said packets is disclosed in lines 40-46 of column 7. This passage clearly indicates that cells from other input interfaces are held until the current packet is finished transiting the switch, thus indicating that the cells of other packets are not interleaved therein. The limitation that steps (1) and (2) are performed at said egress card is disclosed in lines 46-49 of column 7 which indicates that the cells are queued at the egress card (output interface) and that the reassembly is performed using this queue.

Regarding claim **3**, Endo discloses the limitations that said traffic flows transmit frames to said network element (the packets are variable length packets see lines 40-42 of column 5 and lines 21-22 of column 6); and said step 0.1 further includes substeps: (0.1a) queuing said frames (variable length packets) of said each of said plurality of traffic flows prior to said transmitting said each of said at least one data part to said egress card (the variable length packets are queued in one of the queues 65 of the input interface 3 of figure 1; lines 9-20 of column 6 describes this, specifically, lines 18-20 show that the packet is queued prior to transmitting since the packet to be transmitted is selected from a queue); and (0.1b) segmenting said frames in said plurality of traffic flows into said at least one data part of said packets after said queuing said frames (see lines 23-28 of column 6 for example).

Regarding claim **4**, Endo discloses the limitation that said network element includes an ingress card (input interface 3 of figure 1); and said substeps (0.1a) and (0.1b) are performed by

said ingress card (clear from figure 1 in that the queues are contained on the input interface and the queues included packets segmented into cells; see also lines 9-28 of column 6).

Regarding claim **5**, Endo discloses the limitation that each traffic flow of said plurality of traffic flows has a weight and said each traffic flow receives bandwidth on said packet ordered stream based on said weight of said each traffic flow in lines 35-50 of column 9 which indicate that a priority can be given to certain packets. As explained in the last sentence of this passage, a high priority packet is transmitted prior to a low priority packet and thus carries a greater and different weight than a low priority packet.

Regarding claim **6**, Endo discloses the limitation that each traffic flow of said plurality of traffic flows is associated with a class of traffic flow (see lines 39-40 of column 9), said class indicating a priority for said traffic flow (see lines 35-50 of column 9).

Regarding claim **8**, Endo discloses the limitation that said ingress card further has an ingress queuing module adapted to queue said variable-length packets of said plurality of traffic flows into queues at said ingress card of said network element in lines 13-18 of column 6 as well as queues 65 of figure 1.

Regarding claim **9**, Endo discloses the limitation that each traffic flow of said plurality of traffic flows has a weight and said each traffic flow receives bandwidth on said packet ordered stream based on said weight of said each traffic flow in lines 35-50 of column 9 which indicate that a priority can be given to certain packets. As explained in the last sentence of this passage, a high priority packet is transmitted prior to a low priority packet and thus carries a greater and different weight than a low priority packet.

Regarding claim **10**, Endo discloses the limitation that each traffic flow of said plurality of traffic flows is associated with a class of traffic flow (see lines 39-40 of column 9), said class indicating a priority for said traffic flow (see lines 35-50 of column 9).

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent 6,526,023 to Koga et al discloses a traffic control apparatus and U.S. Patent 6,970,460 to Watanabe et al discloses a multiplexing apparatus, both of which switch variable length packets similarly to the present application. U.S. Patent 6,963,572 to Carr et al discloses a method and apparatus for segmentation and reassembly of data packets in a communication system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 571-272-3169. The examiner can normally be reached on Monday and Thursday from 6:30-5:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RCS 12-5-05

Robert C. Scheibel
Examiner
Art Unit 2666